

Era III (ages 6-10) Concrete operational thought

Inferences carried on through system of classes, relations, and quantities maintaining logically invariant properties and which refer to *concrete objects*. These include such logical processes as (a) inclusion of lower order classes in higher order classes; (b) transitive seriation (recognition that if $a = b$ and $b = c$, then $a = c$); (c) logical addition and multiplication of classes and quantities; (d) conservation of number, class membership, length, and mass under apparent change.

Substage 1. Formation of stable categorical classes.

Substage 2. Formation of quantitative and numerical relations of invariance.

Era IV (ages 11 to adulthood) Formal-operational thought

Inferences through logical operations upon propositions or "operations upon operations." Reasoning about reasoning. Construction of systems of all possible relations or implications. Hypothetico-deductive isolation of variables and testing of hypotheses.

Substage 1. Formation of the inverse of the reciprocal. Capacity to form negative classes (for example, the class of all not-crows) and to see relations as simultaneously reciprocal (for example, to understand that liquid in a U-shaped tube holds an equal level because of counterbalanced pressures).

Substage 2. Capacity to order triads of propositions or relations (for example, to understand that if Bob is taller than Joe and Joe is shorter than Dick, then Joe is the shortest of the three).

Substage 3. True formal thought. Construction of all possible combinations of relations, systematic isolation of variables, and deductive hypothesis-testing.

Piaget's inquiry has centered primarily on a person's way of constructing and reasoning about physical reality—on the apprehension of objects, space, time, causal relations, weight, mass, speed, and the like. In some ground-breaking early

SOURCE: Lawrence Kohlberg and Carol Gilligan, "The Adolescent as a Philosopher: The Discovery of the Self in a Postconventional World," *Daedalus* 100 (Fall 1971): 1063.

studies, however, Piaget investigated the child's use of language and symbol in play and imitation, the child's way of accounting for the origins of the visible universe, and the child's development of the capacity for moral judgment.

Inspired by this early work of Piaget's, and also by that of Plato, James Mark Baldwin, John Dewey, and others, my colleague Lawrence Kohlberg, at the Harvard Graduate School of Education, has for more than twenty years researched and written on moral development in children and adults. Kohlberg, a structural-developmental theorist like Piaget, has devised a theory of moral development which shows a sequence of stages in the way people construct social or interpersonal reality.¹⁰ His theory and research are now beginning to serve as a basis for moral education efforts in schools and prisons, and have received widespread acceptance in religious education circles. Kohlberg's stages provide a modern equivalent for the older types of "natural law" theories of ethics. Kohlberg claims that the stages of moral reasoning, in their formal or structural characteristics, are, like Piaget's stages, sequential, hierarchical, invariant, and universal. Also like Piaget, he and his associates have conducted cross-cultural research which is beginning to validate his claims. Kohlberg has appealed not only to empirical validation for his stage theory. He also argues for the ethical validity of his stages on the grounds that they are based on principles of moral reasoning that have demonstrable *universal* validity and appeal.¹¹ This claim means that Kohlberg's theory must be taken as a powerful challenge to the moral relativism that pervades our pluralistic world. Kohlberg's stages can be followed in Table 2.2.

four-and-a-half-year-old will insist that the pencil that is ahead is longer. The eight-year-old, seeing the same change made, will maintain that the pencils are still equal in length: "You can push the front one back and they will still be the same," she reasons.

Pete and I, along with the two children, illustrate that different minds construct differing interpretations of the same data. This phenomenon is not news; we observe it virtually every day. What is remarkable, however, is that we are beginning to understand that our differences of interpretation are not merely random, the arbitrary functions of the content of our particular socialization experiences. Rather, they are functions of *different thought and value patterns, some of which can be systematically accounted for in developmental terms.*

Across more than fifty years of research with children and adolescents, Jean Piaget has shown us that human beings develop their mental processes in a sequence of *stages*, a sequence that is uniform from group to group and from culture to culture.⁸ A stage Piaget defines as the *integrated set of mental operations* used by a person in thinking about a particular subject matter. The progression of stages over time involves *qualitative transformations* in thinking, in which new operations are integrated with, or come to supersede, older ones. Patterns of thinking develop from relatively simple, global, and undifferentiated structures to those which are successively more complex, differentiated, and comprehensive. They progress from an initial egocentric perspective through a successively augmented capacity to see and interpret things from a wide variety of possible standpoints. These stages are *hierarchical* (each successive stage carrying forward in modified and augmented form the operations of the previous stage) and *invariant* (each stage building upon the

previous one so that none can be skipped). The stages and their sequence seem, on the basis of wide empirical testing, to be *universal*.⁹ It should be recognized, however, that a person's or group's rate of movement through the stages and the final stage of equilibration reached are influenced by such factors as schooling, diversity of environmental stimuli, and the average cognitive level prevailing in society or sub-society. A brief overview of Piaget's stages of cognitive-structural development is given in Table 2.1.

Table 2.1
PIAGET'S ERAS AND STAGES OF LOGICAL
AND COGNITIVE DEVELOPMENT

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- Era I (ages 0-2) The era of sensorimotor intelligence
- Stage 1. Reflex action.
 - Stage 2. Coordination of reflexes and sensorimotor repetition (primary circular reaction).
 - Stage 3. Activities to make interesting events in the environment reappear (secondary circular reaction).
 - Stage 4. Means-ends behavior and search for absent objects.
 - Stage 5. Experimental search for new means (tertiary circular reaction).
 - Stage 6. Use of imagery in insightful invention of new means and in recall of absent objects and events.
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Era II (ages 2-5) Symbolic, intuitive, or prelogical thought

Inference is carried on through images and symbols which do not maintain logical relations or invariances with one another. "Magical thinking" in the sense of (a) confusion of apparent or imagined events with real events and objects and (b) confusion of perceptual appearances of qualitative and quantitative change with actual change.

Table 2.2
THE SIX MORAL STAGES

CONTENT OF STAGE	
Level and Stage	What Is Right
LEVEL I— PRECONVENTIONAL Stage 1—Heteronomous Morality	To avoid breaking rules backed by punishment, obedience for its own sake, and avoiding physical damage to persons and property.
Stage 2—Individualism, Instrumental Purpose, and Exchange	Following rules only when it is to someone's immediate interest; acting to meet one's own interests and needs and letting others do the same. Right is also what's fair, what's an equal exchange, a deal, an agreement.
LEVEL II—CONVENTIONAL Stage 3—Mutual Interpersonal Expectations, Relationships, and Interpersonal Conformity	Living up to what is expected by people close to you or what people generally expect of people in your role as son, brother, friend, etc. "Being good" is important and means having good motives, showing concern about others. It also means keeping mutual relationships, such as trust, loyalty, respect and gratitude.
Stage 4—Social System and Conscience	Fulfilling the actual duties to which you have agreed. Laws

Reasons for Doing Right	Social Perspective of Stage
Avoidance of punishment, and the superior power of authorities.	<i>Egocentric point of view.</i> Doesn't consider the interests of others or recognize that they differ from the actor's; doesn't relate two points of view. Actions are considered physically rather than in terms of psychological interests of others. Confusion of authority's perspective with one's own.
To serve one's own needs or interests in a world where you have to recognize that other people have their interests, too.	<i>Concrete individualistic perspective.</i> Aware that everybody has his own interest to pursue and these conflict, so that right is relative (in the concrete individualistic sense).
The need to be a good person in your own eyes and those of others. Your caring for others. Belief in the Golden Rule. Desire to maintain rules and authority which support stereotypical good behavior.	<i>Perspective of the individual in relationships with other individuals.</i> Aware of shared feelings, agreements, and expectations which take primacy over individual interests. Relates points of view through the concrete Golden Rule, putting yourself in the other guy's shoes. Does not yet consider generalized system perspective.
To keep the institution going as a whole, to avoid the break-	<i>Differentiates societal point of view from interpersonal agree-</i>

are to be upheld except in extreme cases where they conflict with other fixed social duties. Right is also contributing to society, the group, or institution.

LEVEL III—POST-CONVENTIONAL, or PRINCIPLED
Stage 5—Social Contract or Utility and Individual Rights

Being aware that people hold a variety of values and opinions, that most values and rules are relative to your group. These relative rules should usually be upheld, however, in the interest of impartiality and because they are the social contract. Some nonrelative values and rights like *life* and *liberty*, however, must be upheld in any society and regardless of majority opinion.

Stage 6—Universal Ethical Principles

Following self-chosen ethical principles. Particular laws or social agreements are usually valid because they rest on such principles. When laws violate these principles, one acts in accordance with the principle. Principles are universal principles of justice: the equality of human rights and respect for the dignity of human beings as individual persons.

down in the system "if everyone did it," or the imperative of conscience to meet one's defined obligations (easily confused with Stage 3 belief in rules and authority; see text).

ment or motives. Takes the point of view of the system that defines roles and rules. Considers individual relations in terms of place in the system.

A sense of obligation to law because of one's social contract to make and abide by laws for the welfare of all and for the protection of all people's rights. A feeling of contractual commitment, freely entered upon, to family, friendship, trust, and work obligations. Concern that laws and duties be based on rational calculation of overall utility, "the greatest good for the greatest number."

Prior-to-society perspective. Perspective of a rational individual aware of values and rights prior to social attachments and contracts. Integrates perspectives by formal mechanisms of agreement, contract, objective impartiality and due process. Considers moral and legal points of view; recognizes that they sometimes conflict and finds it difficult to integrate them.

The belief as a rational person in the validity of universal moral principles, and a sense of personal commitment to them.

Perspective of a moral point of view from which social arrangements derive. Perspective is that of any rational individual recognizing the nature of morality or the fact that persons are ends in themselves and must be treated as such.
